

Date: Wednesday, 4/5/2006 3:31:48 PM
User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : MID TUBE ASSEMBLY
Job Number : 26577
Estimate Number : 10469
P.O. Number : N/A Part Number : D3391023
This Issue : 4/5/2006 S.O. No. : N/A Drawing Number : D3391 REV D
Prsht Rev. : NC Project Number : N/A
First Issue : N/A Type : LANDING GEAR Drawing Revision : D
Previous Run : 26576 Material : N/A
Written By : Due Date : 4/28/2006 Qty: 1 Um: Each
Checked & Approved By : 06.04.06
Comment : Est. A 05.10.20 New Issue KJ/EC
Est. B 06.02.10 ECN773 dwg rev.D EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D25001100 Skidtube Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

SKIDTUBE EXTRUSION

Pick:

Qty	Part Number	Description	Batch
1	D2500-1-100	Extrusion	24593 ET 06-04-07

2.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

- 1-Cut tube to finish length as per Dwg D3391 ET 06-04-07 (1)
- 2-Identify as D3391-023 ET 06-04-07 (1)
- 3-Drill pilot holes using DT8796 as per Dwg D3391 DP 06-4-7
- 4-Open float bag holes to Ø0.250" as per Dwg D3391 using DT8796D visual aid Jig BE 06-04-10 (1)
- 5-C'sink float bag holes as per Dwg D3391 BE 06-04-10 (1)
- 6-Open remaining holes to Ø0.375" BE 06-04-10 (1)
- 7-Remove .030" from Fwd indexing Ridge as per Dwg D3391 DP 06-4-10
- 8-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391 DP 06-4-10
- 9-Deburr BE 06-04-10 (1)
- 10-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.208" holes with paint marker BE 06-04-10 (1)
- 11-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.208" (14 holes) as per Dwg BE 06-04-10 (1)
- 12-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.250" and c'sink (20 holes) BE 06-04-10 (1)
- 13-Open .375" holes to .438" BE 06-04-10 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/5/2006 3:31:48 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 26577

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

114-Deburr and blow out all chips from inside tube

BE 06-04-10

3.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

4.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

fm 06-04-260

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DP 06-5-2

6.0

D33891

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEB

Pick:

Qty Part Number Description Batch

1 D3389-1 Web B26537

A/R Sikaflex-241/-291 M100480

Sikaflex expire date: 06-11-01

Start: 06-05-02 Time: 11:30 am

Finish: 06-05-03 Time: 11:00

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)

IT 06-05-02

8.0

NAS1330C3KB116

Insert



Comment: Qty.: 20.0000 Each(s)/Unit Total: 20.0000 Each(s)

Insert

Pick:

Qty Part Number Description Batch

20 NAS1330C3KB116 Insert M19349

06 06/08/24 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: SD Date: 06/09/10
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/5/2006 3:31:49 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 26577

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

NAS1330C3KB166



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)

Rivnut

Pick:

Qty Part Number

Description

Batch

10

NAS1330C3KB166

Insert

M100732

check Inv

DL 06/08/24

①

10.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Install inserts as per Dwg D3391

DL 06/08/24

①

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect each insert using DT8821

M

DL 06/08/24

①

12.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

Use paint screws to mask inserts.

a.m 06-08-24

①

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DL 06/08/24

①

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: L/A

DL 06/08/24

①

15.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

DL 06/09/12

①

Job Completion



DL 06/09/12

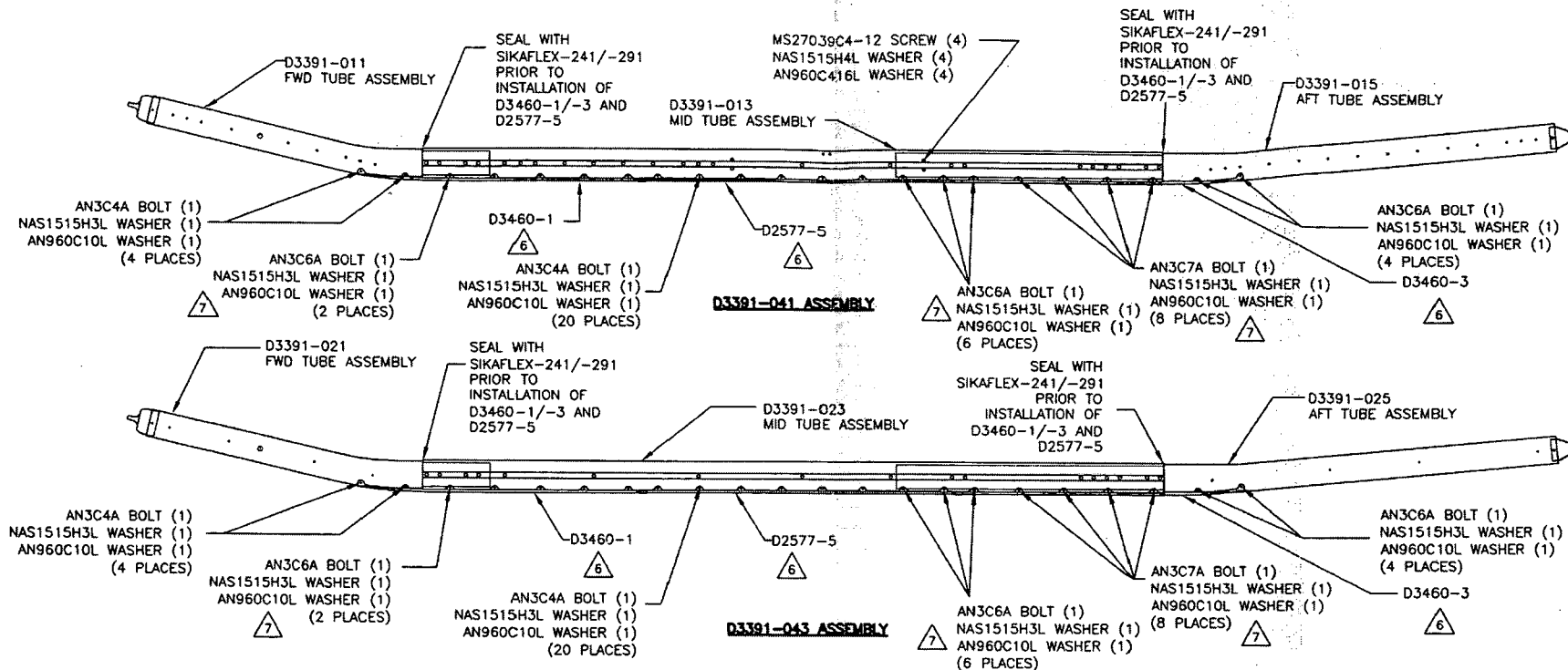
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY - 041	QTY - 043	PART NUMBER	DESCRIPTION
X	X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
		D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
1		D3391-015	AFT TUBE ASSEMBLY
	1	D3391-021	FWD TUBE ASSEMBLY
	1	D3391-023	MID TUBE ASSEMBLY
	1	D3391-025	AFT TUBE ASSEMBLY
24	24	AN3C4A	BOLT
12	12	AN3C6A	BOLT
8	8	AN3C7A	BOLT
44	44	NAS1515H3L	WASHER
44	44	AN960C10L	WASHER
4		MS27039C4-12	SCREW
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
1	1	D2577-5	WEARSHOE
1	1	D3460-1	WEARSHOE
1	1	D3460-3	WEARSHOE

GENERAL NOTES

- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 'E' SIZE HOLES (#0.250-#0.257) FOR WEARSHOE INSERTS. C/SINK #0.391/#0.425 x 100' AS APPLICABLE AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- APPLY A LAYER OF SIKAFLEX -241/-291 ADHESIVE BETWEEN THE BOTTOM OF THE SKIDTUBE ASSEMBLY AND THE WEARPLATES
- DO NOT TORQUE, HAND TIGHTEN ONLY

△

RELEASED

06.01.27

D	06.01.23	UPDATE TOLERANCE, CHANGE HOLE SIZE
C	05.09.27	LENGTHEN AFT EXTENSION
B	05.06.10	DRAWING UPDATES
A	05.02.07	NEW ISSUE
DESIGN	PH	DRAWN BY
CHECKED	PH	APPROVED
DATE	06.01.23	DRAWING NO. 03391
		TITLE 412 FLOAT SKIDTUBE
		REV. D SHEET 1 OF 5
		SCALE NTS

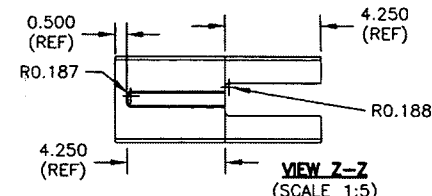
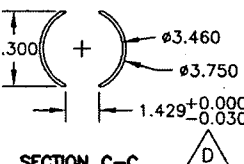
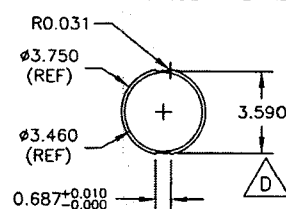
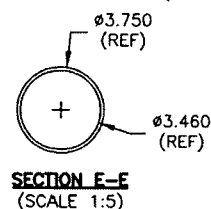
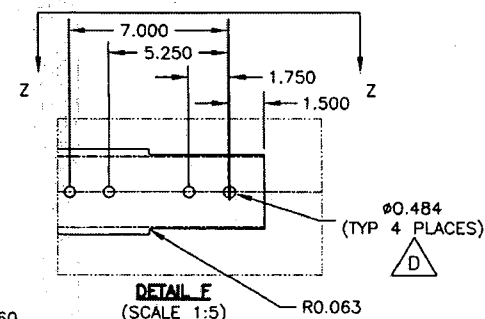
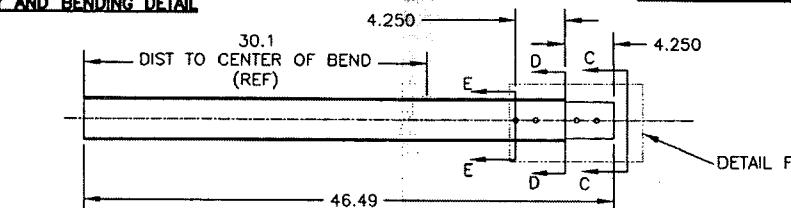
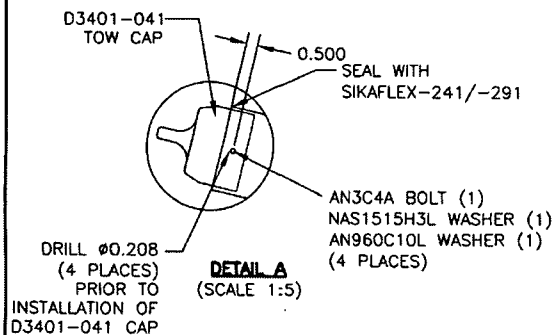
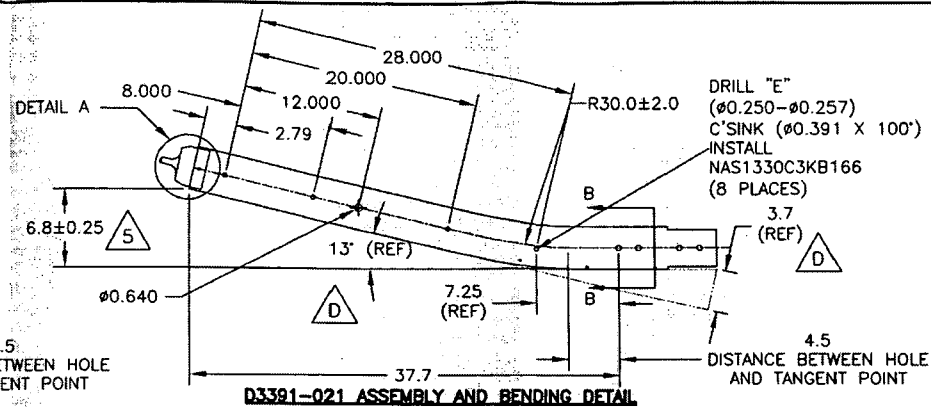
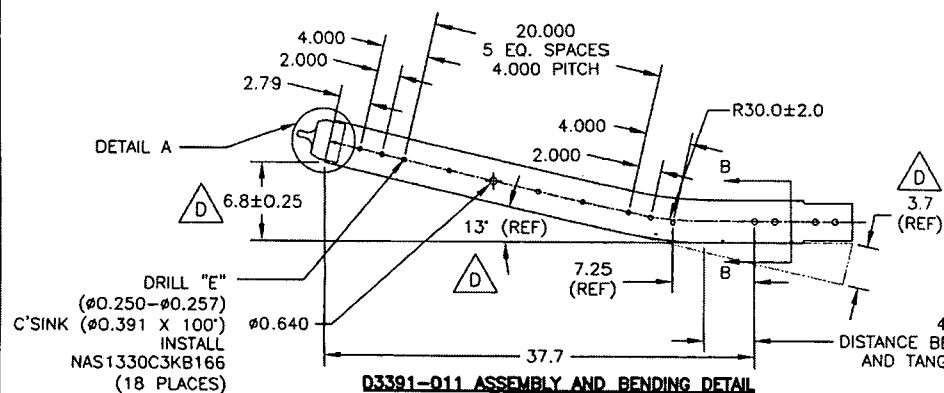
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D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
4	4	AN3C4A	BOLT
4	4	NAS1515H3L	WASHER
4	4	AN960C10L	WASHER
24	14	NAS1330C3KB166	INSERT

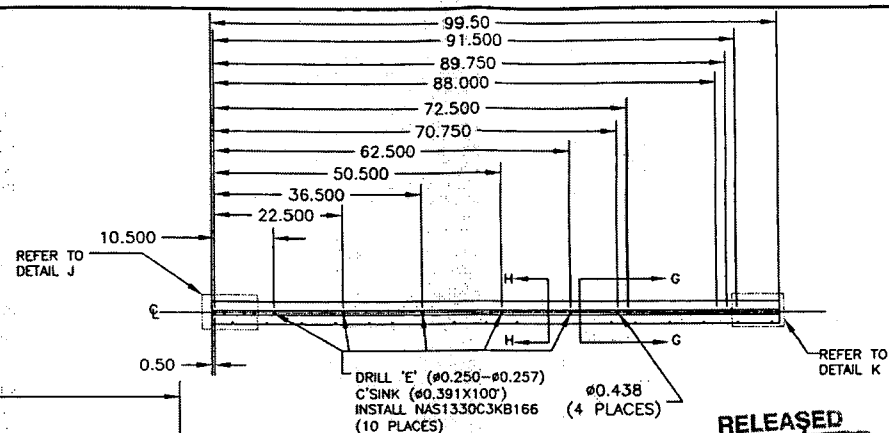
DRILL "E" (Ø0.250-Ø0.257) C'SINK (Ø0.391 X 100') INSTALL NAS1330C3KB166 (6 PLACES)

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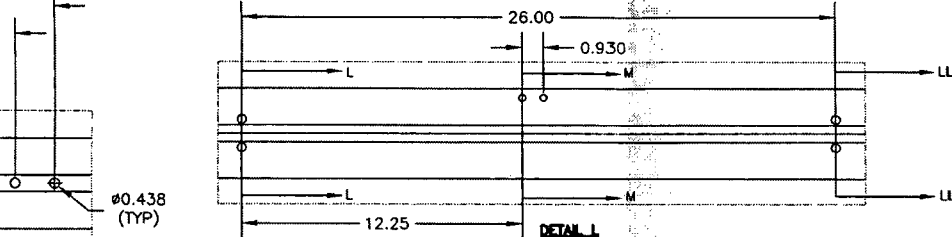
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PH	PH		
CHECKED	APPROVED	DRAWING NO.	REV. D
		D3391	SHEET 2 OF 5
DATE		TITLE	SCALE
06.01.23		412 FLOAT SKIDTUBE	1:10

WORK ORDER
26577
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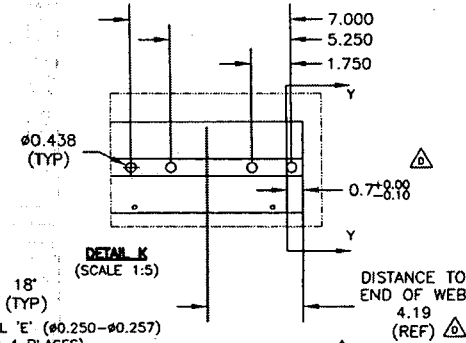
RELEASED
06.01.27 ~~11~~




DETAIL 1
(SCALE 1:5)

DRILL 'O' ($\phi 0.332 - \phi 0.338$)
 INSTALL NAS1329C4KB140 INSERT
 MS27039C4-08 SCREW
 NAS1515H4L WASHER
 AN960C416L WASHER
 (TYP 4 PLACES)

- DRILL 'E' (Ø0.250-Ø0.257)
C'SINK (Ø0.391X100")
INSTALL NAS1330C3KB116 INSERT
MS27039C1-09 SCREW
NAS1515H3L WASHER
AN960C10L WASHER
(TYP 4 PLACES)



DETAIL K
(SCALE 1:5)

DISTANCE TO
END OF WEB
4.19
(REF) 

SECTION 1-1
(SCALE 1:4)

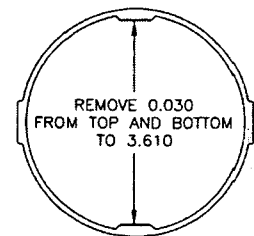
QTY -- 013	QTY - 023	PART NUMBER	DESCRIPTION
X		D3391-013	MID TUBE ASSEMBLY
	X	D3391-023	MID TUBE ASSEMBLY
1	1	D2500-1-100	EXTRUSION
1	1	D3389-1	WEB
24	20	NAS1330C3KB116	INSERT
24	10	NAS1330C3KB166	INSERT
4		NAS1329C4KB140	INSERT
4		NAS 1515H3L	WASHER
4		AN960C10L	WASHER
4		NAS 1515H4L	WASHER
4		AN960C416L	WASHER
4		MS27 039C1-09	SCREW
4		MS27 039C4-08	SCREW

D3391-013/-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX

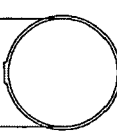
SHOP COPY
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UNCONTROLLED COPY
TO AMENDMENT
WITH OUT NOTICE
SUBJECT 5
WORK ORDER
PER 26577

SECTION X-X
(SCALE 1:2)

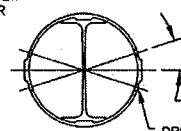


SECTION M-M
(SCALE 1:4)

REMOVE 0.225
FROM TOP AND BOTTOM
TO 3.800
(0.7 FROM BOTH ENDS)



SECTION Y-Y
(SCALE 1:4)

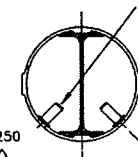


SECTION 11-11
(SCALE 1:4)

DRILL 'E' ($\phi 0.250 - \phi 0.257$)
(TYP 4 PLACES)



SECTION G-G
(SCALE 1:4)



SECTION H-H
(SCALE 1:4)

NAS1330C3KB116
INSERT
(TYP 20 PLACES)

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DESIGN
PH

CHECKED 

DATE
06.01.23

DRAWN BY	P.H
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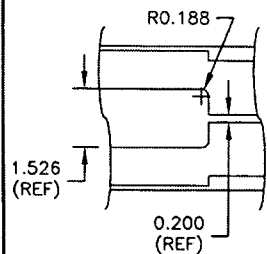
DART DART AEROSPACE USA, INC.
PORT HADLOCK, WA

DRAWING NO
D3391

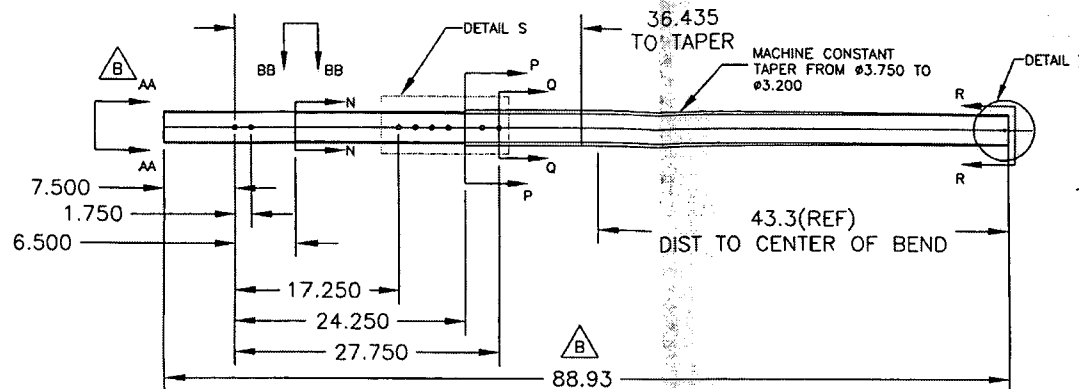
412 FLOAT SKIDTUBE

REV. D
SHEET 3 OF 5

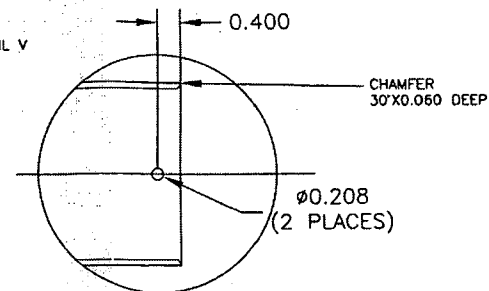
1:20



VIEW BB-BB
(SCALE 1:3)



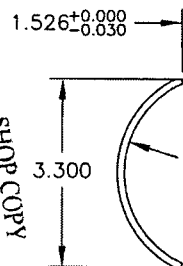
D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



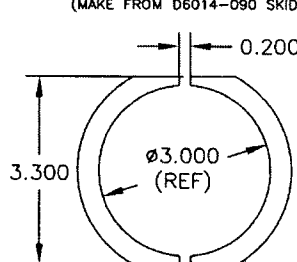
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(SCALE 1:2)

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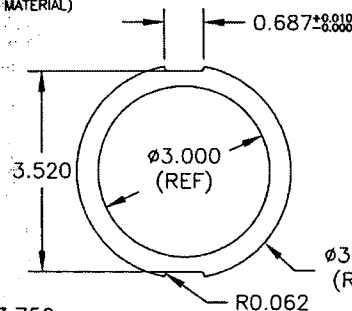
06-01-27



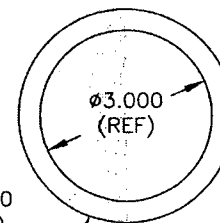
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(SCALE 1:2)



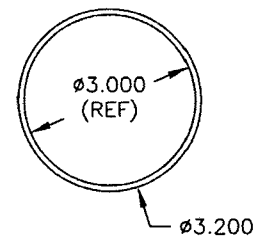
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(SCALE 1:2)



SECTION P-P
(SCALE 1:2)

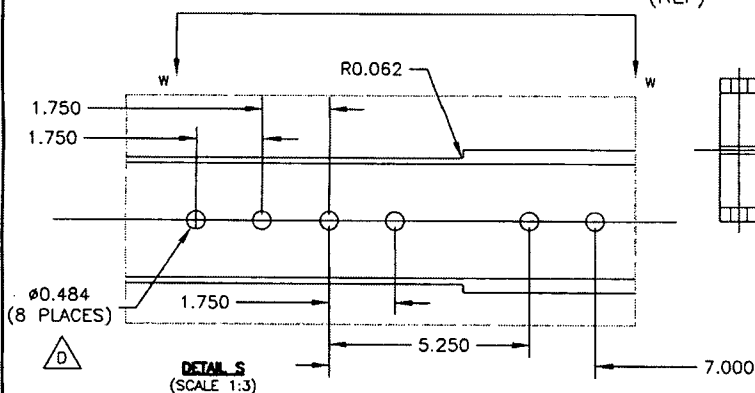


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(SCALE 1:2)

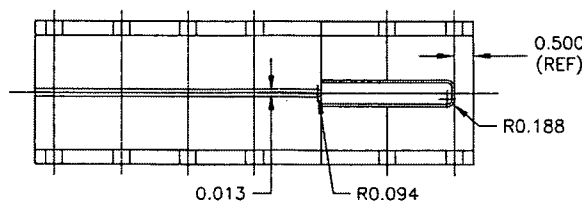


SECTION R-R
(SCALE 1:2)

NO. 26577
WORK ORDER
WITHOUT NOTICE
SUBJECT TO AMENDMENT
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY



DETAIL S
(SCALE 1:3)



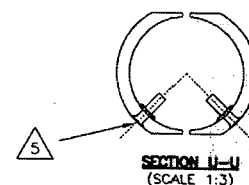
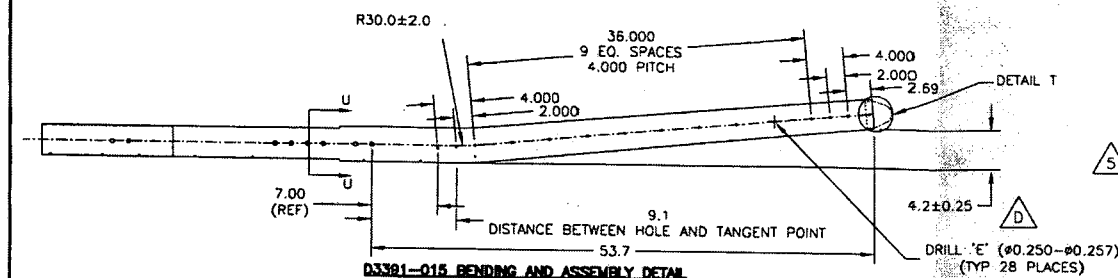
VIEW W-W
(SCALE 1:3)

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DESIGN	PH	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA	REV. D
CHECKED	#	APPROVED	#	DRAWING NO. D3391	SHEET 4 OF 5
DATE	06.01.23	TITLE	412 FLOAT SKIDTUBE	SCALE	1:12

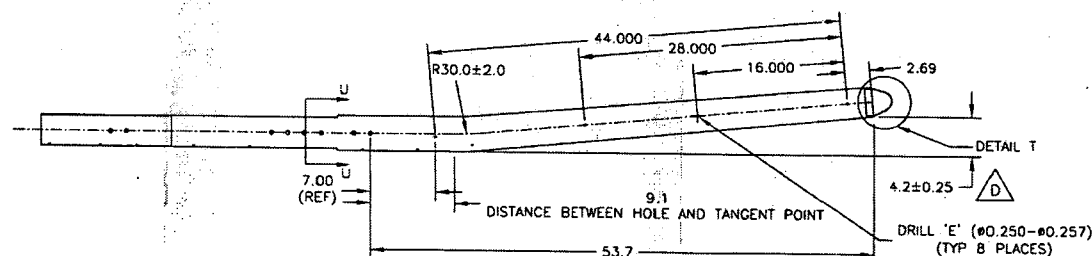
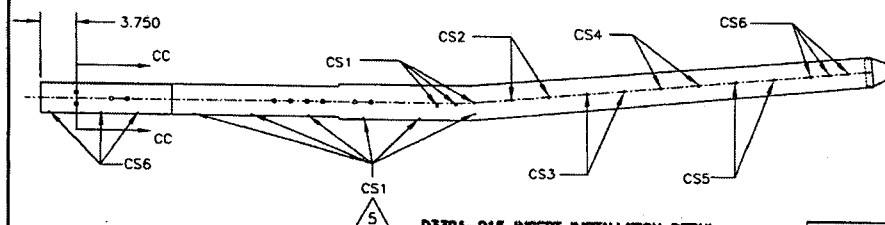
RELEASED
06.01.27



AN3C4A BOLT (1)
NAS1515H3L WASHER (1)
AN960C10L WASHER (1)
(2 PLACES)

DETAIL T
(SCALE 1:3)

SEAL WITH
SIKAFLEX-241/-291



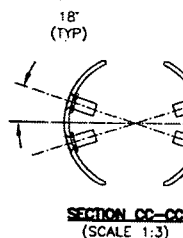
D3391-025 BENDING AND ASSEMBLY DETAIL

C'SINK AND INSTALL AESS10KBXXX AND/OR
NAS1330C3KBXXX IN HOLES MARKED CS1-CS6 AS
FOLLOWS

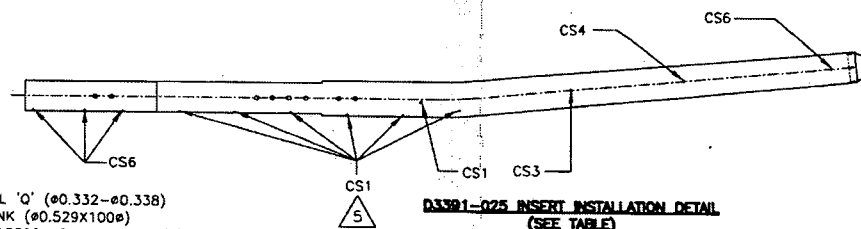
HOLES MARKED	QTY D3391-015	QTY D3391-025	C'SINK	P/N
CS1	18	14	Ø0.425	AESS10KB366
CS2	4		Ø0.391	AESS10KB366
CS3	4	2	Ø0.391	NAS1330C3KB316
CS4	4	2	Ø0.391	NAS1330C3KB266
CS5	4		Ø0.391	NAS1330C3KB216
CS6	12	8	Ø0.391	NAS1330C3KB166

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X		D3391-015	AFT TUBE ASSEMBLY
	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
18	14	AESS10KB366	INSERT
4	2	NAS1330C3KB316	INSERT
4	2	NAS1330C3KB266	INSERT
4		NAS1330C3KB216	INSERT
12	8	NAS1330C3KB166	INSERT
4		NAS1330C4KB151	INSERT
2	2	AN3C4A	BOLT
2	2	NAS1515H3L	WASHER
2	2	AN960C10L	WASHER



DRILL 'O' (Ø0.332-Ø0.338)
C'SINK (Ø0.529X100°)
NAS1330C4KB151 INSERT (1)
(4 PLACES)



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DESIGN PH	DRAWN BY PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3391	REV. D SHEET 5 OF 5
DATE 06.01.23	TITLE 412 FLOAT SKIDTUBE	SCALE 1:12	

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